

REMARKS

In view of the following reasoning for allowance, the applicants hereby respectfully request further examination and reconsideration of the subject application.

A. Examiner Interview

Examiner Anh Do and the applicants' representative Katrina Lyon conducted an Examiner Interview on April 2, 2008. Proposed amendments were provided to Examiner Do and were discussed during the Interview. Examiner Do suggested that Claim 1 be amended with subject matter similar to Claim 25 because even though Claim 1 as amended would overcome the 101 rejection, other novelty and non-obvious rejections might be issued on this claim. In response, the applicants have amended Claim 1 to include the limitations of Claim 6, the subject matter of Claim 6 being similar to that of Claim 25. Additionally, Examiner Do suggested that Claim 10 also be amended to include a displaying step similar to that added to Claim 1 in the proposed amendment. The applicants have also incorporated this suggested subject matter into Claim 10.

B. Claim Rejection Under 35 USC 101 of Claims 1-20.

Claims 1-20 were rejected under 35 USC §101 as being directed to non-statutory subject matter because it was alleged that Claims 1-20 were drawn to a computer-implemented process that merely manipulates data or an abstract idea, or merely solves a mathematical problem without a limitation to a practical application in the technological arts.

While the applicants do not admit to and do not believe that the aforementioned "computer-readable medium" is non-statutory subject matter, Claims 1 and 20 have been amended to add the limitation of displaying the writings written

on the whiteboard on another display. This additional displaying action is a tangible, practical application in the technological arts. Accordingly, it is kindly requested that the rejection of th Claims 1-20 be reconsidered.

C. The 35 USC 102(b) Rejection of Claims 21-24.

Claims 21-24 were rejected under 35 USC 102(b) as being anticipated by Chu et al. (US Patent No. 6,802,611), herein after referred to as Chu. It was contended in the above-identified Office Action that Chu teaches all the elements of the rejected claims. The applicants respectfully traverse this contention of anticipation.

As to Claims 21-24, the applicants' claim a system for segmenting a clear image of a whiteboard work surface for remote collaboration comprising..."a camera capturing one or more images of a whiteboard that includes one or more items projected on the whiteboard and writings written on the whiteboard; and

a visual echo cancellation module for separating into two files the one or more items projected on the whiteboard and the writings written on the whiteboard, wherein the visual echo cancellation module comprises sub-modules for:

obtaining geometric calibration data determining the geometric relationship between a whiteboard and a view of said whiteboard captured by a camera;

obtaining color calibration data determining the color relationship between the color of writings written on the whiteboard and the color of the writings written on the whiteboard in an image captured by said camera;

capturing an image of said whiteboard having projected content and writings written on the whiteboard;

calculating a visual echo of the captured image by correcting the color and geometry of the captured image using the geometric calibration data and the color calibration data; and

using the ratio of the albedo of the captured image to the albedo of the visual echo to identify writings on the whiteboard."

Chu teaches a system and method for presenting and capturing images on a presentation board are described. More particularly, embodiments of Chu's invention provide a projector adapted to display one or more images onto a surface and a camera adapted to capture the one or more images from the surface. But Chu does not teach, for example, the applicants' claimed visual echo cancellation module that has sub-modules for obtaining geometric calibration data determining the geometric relationship between a whiteboard and a view of said whiteboard captured by a camera; obtaining color calibration data determining the color relationship between the color of writings written on the whiteboard and the color of the writings written on the whiteboard in an image captured by said camera; capturing an image of said whiteboard having projected content and writings written on the whiteboard; calculating a visual echo of the captured image by correcting the color and geometry of the captured image using the geometric calibration data and the color calibration data; and using the ratio of the albedo of the captured image to the albedo of the visual echo to identify writings on the whiteboard.

A prima facie case of anticipation is established only when the Examiner shows, inter alia, that the cited reference teaches each of the claimed elements of a rejected claim. In this case, the Chu reference does not teach the advantageous features of the applicants' claimed invention such as a visual echo cancellation module that has sub-modules for obtaining geometric calibration data determining the geometric relationship between a whiteboard and a view of said whiteboard captured by a camera; obtaining color calibration data determining the color relationship between the color of writings written on the whiteboard and the color of the writings written on the whiteboard in an image captured by said camera; capturing an image of said whiteboard having projected content and writings written on the whiteboard; calculating a visual echo of the captured image by correcting the color and geometry of the captured image using the geometric calibration data and the color calibration data; and using the ratio of the albedo of the captured image to the albedo of the visual echo to identify writings on the whiteboard. Thus, the rejected claims recite advantageous features that are not taught in the cited art, and

as such a prima facie case of anticipation is not established. It is, therefore, respectfully requested that the rejection of Claims 21-24 be reconsidered based on the following exemplary claim language,

“A system for segmenting a clear image of a whiteboard work surface for remote collaboration comprising:

a camera capturing one or more images of a whiteboard that includes one or more items projected on the whiteboard and writings written on the whiteboard; and

a visual echo cancellation module for separating into two files the one or more items projected on the whiteboard and the writings written on the whiteboard, **wherein the visual echo cancellation module comprises sub-modules for:**

obtaining geometric calibration data determining the geometric relationship between a whiteboard and a view of said whiteboard captured by a camera;

obtaining color calibration data determining the color relationship between the color of writings written on the whiteboard and the color of the writings written on the whiteboard in an image captured by said camera;

capturing an image of said whiteboard having projected content and writings written on the whiteboard;

calculating a visual echo of the captured image by correcting the color and geometry of the captured image using the geometric calibration data and the color calibration data; and

using the ratio of the albedo of the captured image to the albedo of the visual echo to identify writings on the whiteboard. “


D. Allowability of Claims 25-28.

The Office Action stated that Claims 25-28 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claim. In response, the applicants have amended Claim 21 to include the limitations of Claim 24, cancelled Claim 24 and amended the remaining claims of this claim set to ensure proper dependency. The applicants believe that these amendments make Claims 21-28 patentable. Reconsideration of these claims is respectfully requested.

D. Summary.

In summary, it is believed that Claims 1-5, 6-24 and 26-28 are in condition for allowance. Allowance of these claims at an early date is courteously solicited.

Respectfully submitted,


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